

The Need for Reservoirs, Pt. II

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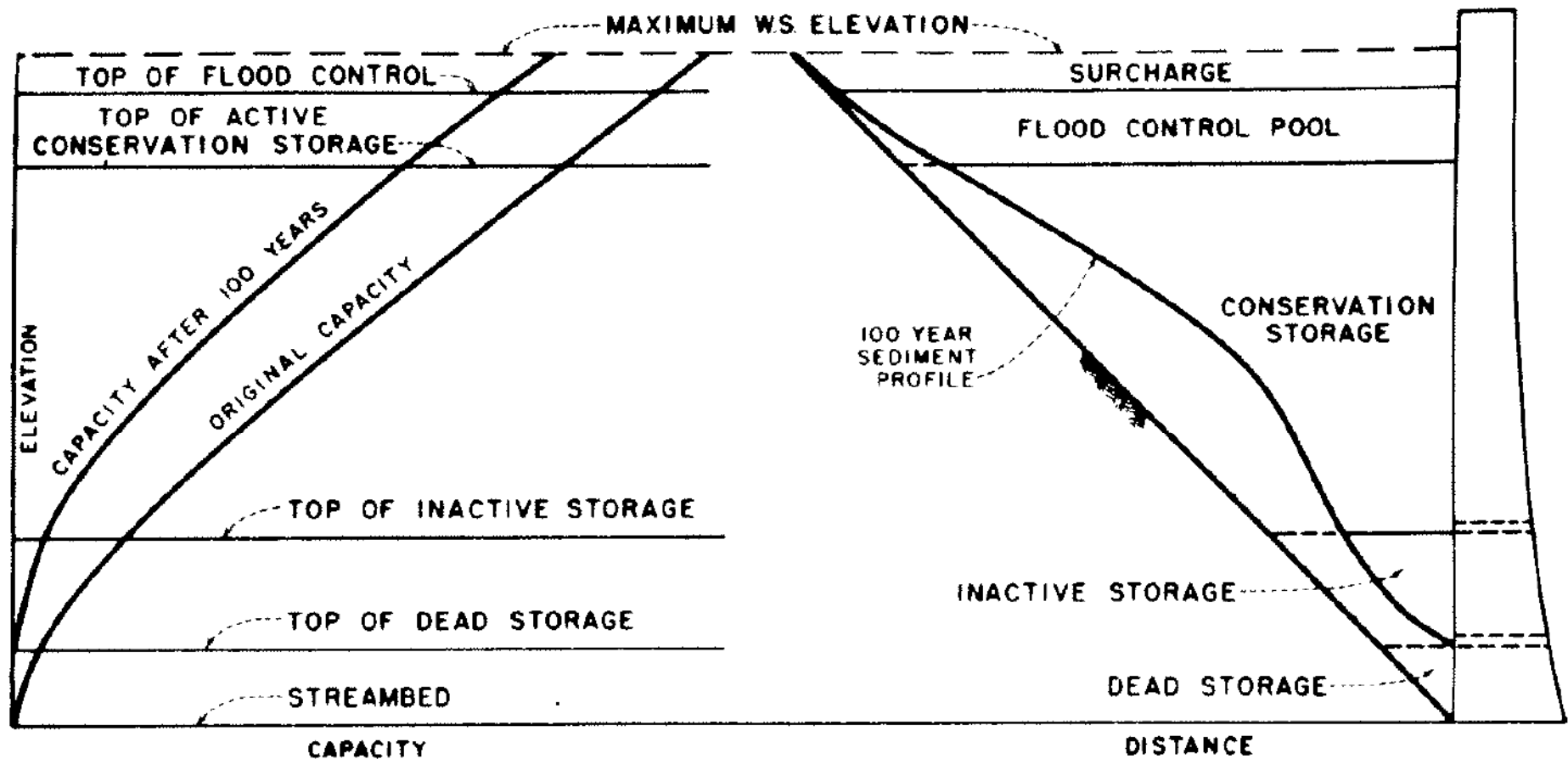


Reservoir Purposes

- Flood Risk Reduction
- Hydropower
- Fish and Wildlife
- Water Supply
- Recreation



Reservoir Sediment Definitions



SCHEMATIC DIAGRAM
RESERVOIR ALLOCATIONS
SEDIMENT DEPOSITION



Flood Risk Reduction

- Reduce or prevent flood peaks
- 33% of storage across all USACE projects
- USACE dams
 - ▶ prevented \$485 billion in damages from 2004 to 2013
 - ▶ \$13.4 billion in damages prevented in 2013



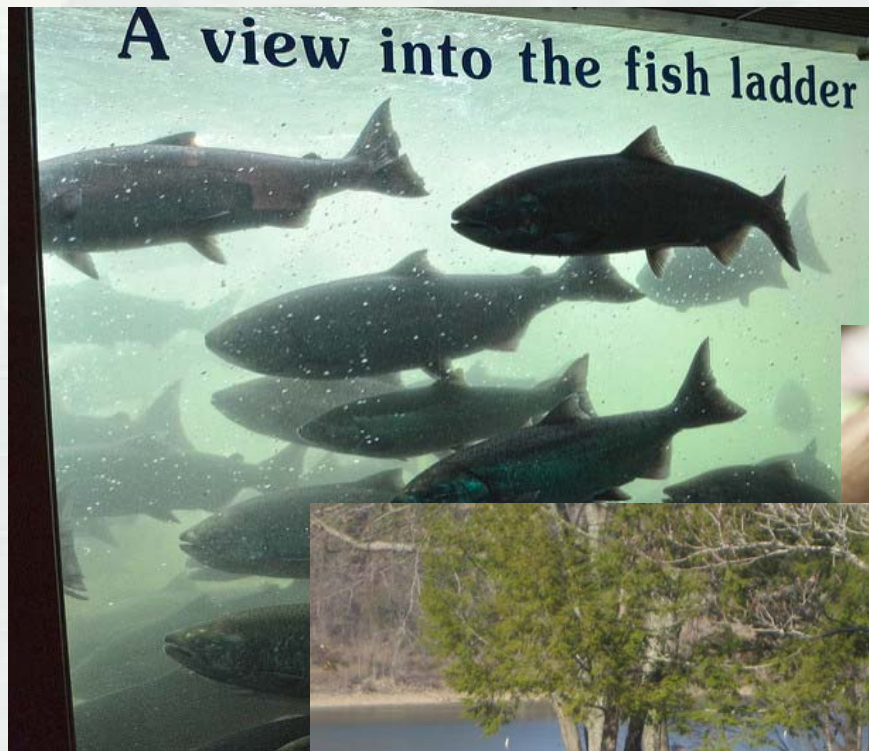
Hydropower

- In 2015, 249 TWh of hydropower were produced in the U.S.
 - ▶ 6.1% of U.S. electricity production



Fish and Wildlife

- Reservoirs can support a variety of wildlife.



Water Supply

- Municipal and Industrial (M&I)
- Primary water source for many cities
- Industrial uses
 - ▶ Cooling
 - ▶ Process Water
 - ▶ Dilution of effluent



USACE Water Supply

- USACE has M&I water supply agreements at 136 reservoirs
 - ▶ 9.8 million acre-feet
 - ▶ 90% of this storage was part of the original project plan
- Reservoir sedimentation decreases the conservation pool available for M&I.



Irrigation

- 46 Corps projects in the West with irrigation as authorized purpose
 - ▶ Administered by Bureau of Reclamation
 - ▶ 533 individual irrigation agreements
 - ▶ Accounts for nearly \$5M in O&M costs
- 12% of dams in National Inventory of Dams



Recreation

- Boating
- Swimming



Recreation

- Fishing



Conclusions

- Many uses for reservoirs, including:
 - ▶ Flood Risk Reduction
 - ▶ Hydropower
 - ▶ Fish and Wildlife
 - ▶ Recreation
 - ▶ Irrigation
- All are impacted by reservoir sedimentation



Questions?

